

ER619617825US

UNITED STATES PATENT APPLICATION

of

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for

LOCKABLE MOTORCYCLE STAND

BACKGROUND

1. The Field of the Invention

[0001] The present invention relates to an apparatus for supporting and securing a motorcycle, especially as regards transporting, storing, maintaining or repairing a motorcycle specifically designed for off-road use.

2. Brief Description of the Art

[0002] Motorcycle stands can come in numerous varieties with many different mechanical designs and associated uses. Consequently, motorcycle stands have certain limitations according to their respective designs.

[0003] Most motorcycle stands could be separated into two categories: leverage devices and rack devices. The leverage devices usually include a characteristic lever that lifts the motorcycle onto some sort of frame thereby supporting the weight of the motorcycle.

The rack devices usually contain some sort of track for the wheels of the motorcycle to direct and limit the movement of the wheels, or a similar device to restrain the wheels.

[0004] The leverage devices generally support the motorcycle such that one wheel is off the ground while the motorcycle is being supported by the device. Keeping one wheel on the ground helps prevent tipping of the motorcycle while it is being supported. A leverage device that lifts both wheels of the motorcycle off the ground while the device is supporting the motorcycle is available. However, the leverage devices are relatively unstable because the motorcycle is usually not secured to the device. Also, the weight of the motorcycle may be reversed while on the device allowing the motorcycle to fall off the device. Leverage devices are generally suited to maintenance, repair, or temporary parking of the motorcycle, but are not used for transport of the motorcycle. Leverage

devices do not provide sufficient security to allow transport, especially since the top portions of the motorcycle are not tied down or otherwise secured and tipping of the motorcycle is more likely.

[0005] The rack devices are generally characterized by some type of restraint of at least one wheel of the motorcycle. The wheel, or wheels, may be restrained by a track (similar in appearance to a rain gutter) or perhaps a configuration of the device that does not allow easy reversal of the wheel (a system of small ramps and restraints) and supports the motorcycle in an upright position. Rack devices are more suited to transport of the motorcycle because of the decreased likelihood that the motorcycle will tip to one side or be allowed to roll. However, the more secure position does not facilitate maintenance or repair operations. The more secure position is not generally desired for temporary parking because the motorcycle cannot be easily inserted into and removed from the device. Also, the wheel and the associated motorcycle suspension being restrained may be subject to additional wear due to the restraining mechanism, especially when the motorcycle is being transported.

[0006] The design of certain motorcycle stands may limit the type of motorcycle that may be used with that particular device. For instance, a device that supports the weight of the motorcycle by applying a force, or pressure to the bottom of the motorcycle may not be used with certain motorcycles, especially sport motorcycles commonly described as “bullet bikes.” The reason is that sport motorcycles generally have a plastic or fiberglass shell covering the frame of the motorcycle. The fiberglass shell may be crushed between the stand and motorcycle frame.

[0007] The thickness of the motorcycle wheels may also influence the security of certain devices. If the track of a certain device does not accommodate one or both wheels of the motorcycle, the device may not provide the necessary security to allow transport of the motorcycle.

SUMMARY OF THE INVENTION

[0008] The apparatus described herein, a lockable motorcycle stand, provides the security necessary to allow transport of a motorcycle as well as the versatility to allow repair, maintenance or storage of the motorcycle. The lockable motorcycle stand contains a unique restraining system acting in cooperation with a supporting frame.

[0009] The frame of the lockable motorcycle stand can be rotated from an initial position to a supporting position. The frame may have a base to stabilize the stand as well as an upper plate to support the motorcycle. An arm can be attached to the frame in such a manner as to provide a lever capable of lifting the motorcycle onto the frame as the frame is moved into the supporting position.

[0010] A restraining system is integrated into the frame. The restraining system has two hooks that are capable of extending in height and rotating forward and back. The hooks proceed through apertures in each side of the upper plate. While the hooks are rotated toward the back of the apparatus, the hooks may be extended above the level of the foot-pegs of the motorcycle, which foot-pegs would be located near the level of the upper plate. With the hooks above the level of the foot-pegs, the hooks may be rotated to the forward position and over the foot-pegs. When the hooks settle over the foot-pegs, the motorcycle cannot be released from the apparatus until the hooks have been extended above the foot-pegs again and rotated to the back position.

[0011] Some of the benefits of the apparatus include the combination of simplicity and security provided. A motorcycle can be quickly and easily mounted on the apparatus, and just as quickly and easily removed. This allows maintenance or repairs to be performed on the motorcycle, as well as safe storage of the motorcycle. A motorcycle can also be transported without the use of any other tie-down equipment. The apparatus supports a motorcycle and may suspend both wheels off the ground, but will at least support the majority of the weight of a motorcycle so as to let out the suspension of the motorcycle. A motorcycle may therefore be transported without causing any wear on the front seals of the forks on the motorcycle.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Figure 1 is a perspective view of the lockable motorcycle stand apparatus.

[0013] Figure 2 is a perspective view of the support system of the lockable motorcycle stand apparatus.

[0014] Figure 3 is a perspective view of the restraining system of the lockable motorcycle stand apparatus.

[0015] Figure 4 is a side view showing the lockable motorcycle stand apparatus in the retracted position, and in relation to a motorcycle.

[0016] Figure 5 is a side view showing the lockable motorcycle stand apparatus in the process of use, and in relation to a motorcycle.

[0017] Figure 6 is a side view showing the lockable motorcycle stand apparatus in the extended position, and in relation to a motorcycle.

[0018] Figure 7 is a perspective view of a bracket.

[0019] Figure 8 provides a side view of L-supports used in the bed of a pickup truck.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0020] It will be readily understood that the following detailed description of the embodiments of the apparatus, process and method associated with the present invention is not intended to limit the scope of the invention, as claimed, but it is merely representative of the presently preferred embodiments of the invention.

[0021] As shown in Figure 1, the apparatus described herein, a locking motorcycle stand, allows a wide variety of uses, and a combination of uses not usually available with similar devices. As shown in Figure 2, the apparatus has a system for supporting the weight of the motorcycle 110 in a position where both wheels are suspended off the ground, which can also be described as means supporting the motorcycle 110. As shown in Figure 3, the apparatus also has a system for locking the motorcycle 110 onto the supporting system, which can also be described as means for restraining the motorcycle 110. This unique combination allows the apparatus to be used to perform repairs or maintenance on the motorcycle 110 in a safe position, as well as transport the motorcycle 110 safely with a minimum of stress on the suspension of the motorcycle 110.

[0022] The apparatus 10 can be made of a variety of materials, for example and without limitation, polished aluminum, aluminum, stainless steel, fiberglass, or graphite composites. As will be recognized by one having ordinary skill in the art, the material used to construct the apparatus 10 needs to provide the required strength and rigidity, as well as being workable, in that it can be cut or shaped to provide the necessary parts and connections. The apparatus and the associated parts may be described as having left 12 and right 14 sides, and proximate 16 (front or forward) and distal 18 (back or rear) ends.

[0023] The supporting system of the apparatus 10 contains a base plate 20. The base plate 20 is a flat surface that simply provides a base for the apparatus 10. The base plate 20 needs to be large enough to support the motorcycle without allowing the motorcycle to wobble from left to right, or front to back. The base plate 20 is generally approximately two feet wide by two and a half feet long. As will be recognized by one having ordinary skill in the art, the exact dimensions of the base plate 20 are not critical to the function of the apparatus 10.

[0024] The motorcycle is supported on the top plate 22 of the apparatus 10. The top plate 22 is a flat surface where the frame of the motorcycle rests when the apparatus 10 is in use. The dimensions of the top plate 22 are not critical, but usually the top plate 22 will be approximately one foot by one foot square. The top plate 22 may have a vertical edge 24 extending around the circumference of the top plate 22. The vertical edge 24 may be a separate piece of material attached at approximately a right angle to the top plate 22 and extending downward, attached by welding. The vertical edge 24 may also be an extension of the top plate 22 that is bent downward at approximately a right angle. The top plate 22 has two U-wings 26. The U-wings 26 can be an extension of the top plate 22, similar to the vertical edge 24, but the U-wings 26 are co-planar with the top plate 22 and have a hook aperture 28 cut out. The hook aperture 28 allows the appropriate threaded hook 74 to pass through the hook aperture 28. A U-wing 26 may also be a separate piece of material attached to the top plate 22, generally attached by welding. Two U-wings 26 are located toward the distal end of the top plate 22, with a U-wing 26 on the left 12 and right 14 sides of the top plate 22.

[0025] The left base frame 32 and the right base frame 34 are attached to the base plate 20 by any means appropriate, generally welding. The left base frame 32 and the right base frame 34 are essentially parallel to each other when attached to the base plate 20. The left base frame 32 and the right base frame 34 are positioned approximately one and half to two feet apart from each other and centered on the base plate 20.

[0026] The left base frame 32 is approximately two and half feet in length. The left base frame 32 extends from the proximate end of the apparatus 10 in generally a straight line for approximately three-quarters of the length, where the left base frame 32 bends toward the middle of the base plate 20 at approximately a forty-five degree angle for approximately three inches and then bends again toward the distal end of the apparatus 10 at approximately a forty-five degree angle for the remainder of the length of the left base frame 32. The left base frame 32 may have an L-shape cross-section, providing a left base frame arm 36 and a left base frame foot 38, with the outside surface of the left base frame foot 38 lying against the surface of, and attached to, the base plate 20.

[0027] Similarly, the right base frame 34 is approximately two and half feet in length. The right base frame 34 extends from the proximate end of the apparatus 10 in generally a straight line for approximately three-quarters of the length, where the right base frame 34 bends toward the middle of the base plate 20 at approximately a forty-five degree angle for approximately three inches and then bends again toward the distal end of the apparatus 10 at approximately a forty-five degree angle for the remainder of the length of the right base frame 34. The right base frame 34 has an L-shape cross-section, providing a right base frame arm 40 and a right base frame foot 42, with the outside surface of the right base frame foot 42 lying against the surface of, and attached to, the base plate 20.

When the left frame base foot 38 and the right frame base foot 42 are attached to the base plate 20, the left base frame foot 38 and the right base frame foot 42 point toward each other, toward the middle of the base plate 20. The left base frame arm 36 and the right base frame arm 40 provide a basis for the support system and locking system of the apparatus.

[0028] The two rear support rods 44 each consist of a straight piece of material approximately one foot in length and may have a square or circular cross-section. One rear support rod 44 is attached at one end to the left base frame arm 36 at or near the distal end of the left base frame arm 36 using a hinge attachment 60, and attached at the other end to the distal, left corner of the top plate 22 using another hinge attachment 60, generally attached to the vertical edge 24 at that corner. Similarly, another rear support rod 44 is attached at one end to the right base frame arm 40 at or near the distal end of the right base frame arm 40 using a hinge attachment 60, and attached at the other end to the distal, right corner of the top plate 22 using another hinge attachment 60, generally attached to the vertical edge 24 at that corner.

[0029] The two rear support rods 44 may be connected with a secure brace 45. The secure brace 45 simply provides more support and rigidity for the frame 30. The secure brace 45 is securely attached to each rear support rod 44.

[0030] The two forward support rods 46 each consist of a straight piece of material approximately one foot in length and may have a square or circular cross-section. One forward support rod 46 is attached at one end to the left base frame arm 36 toward the proximate end of the left base frame arm 36 (approximately six to twelve inches from the proximate end of the left base frame 32) using a hinge attachment 60, and attached at the

other end to the proximate, left corner of the top plate 22 using another hinge attachment 60, generally attached to the vertical edge 24 at that corner. Similarly, another forward support rod 46 is attached at one end to the right base frame arm 40 toward the proximate end of the right base frame arm 40 (approximately six to twelve inches from the proximate end of the right base frame 34) using a hinge attachment 60, and attached at the other end to the proximate, right corner of the top plate 22 using another hinge attachment 60, generally attached to the vertical edge 24 at that corner.

[0031] As will be recognized by those skilled in the art, it is possible to build the apparatus using three supporting rods, either two rear support rods 44 and one forward support rod 46, or two forward support rods 46 and one rear support rod 44. The supporting rods being hingedly attached to the base plate 20 and the top plate 22 in a triangular formation.

[0032] The left levering arm 48 is a piece of material approximately one to three feet in length and may have a square or circular cross-section. The proximate end of the left levering arm 48 has a left handle 50, the left handle 50 being a piece of material similar to the left levering arm 48 and approximately six inches in length. The left handle 50 extends left of the left levering arm 48 approximately perpendicular to the left levering arm 48 and co-planar with the base plate 20 and top plate 22.

[0033] The distal end of the left levering arm 48 is attached to the forward support rod 46 on the left side of the apparatus, and attached using the same hinge attachment 60 which attaches the forward support rod 46 to the left frame base arm 36. The angle created by the left levering arm 48 and the forward support rod 46 is approximately seventy-five degrees. The left brace 52 is a piece of material similar to the left levering arm 48 and

approximately six to twelve inches in length. The left brace 52 attaches to the left levering arm 48 and the forward support rod 46 opposite the angle created by the left levering arm 48 and the forward support 46. The left brace 52 is usually attached by welding.

[0034] The right levering arm 54 is a piece of material approximately one to three feet in length and may have a square or circular cross-section. The proximate end of the right levering arm 54 has a right handle 56, the right handle 56 being a piece of material similar to the right levering arm 54 and approximately six inches in length. The right handle 56 extends right of the right levering arm 54 approximately perpendicular to the right levering arm 54 and co-planar with the base plate 20 and top plate 22.

[0035] The distal end of the right levering arm 54 is attached to the forward support rod 46 on the right side of the apparatus, and attached using the same hinge attachment 60 which attaches the forward support rod 46 to the right frame base arm 40. The angle created by the right levering arm 54 and the forward support rod 46 is approximately seventy-five degrees. The right brace 58 is a piece of material similar to the right levering arm 54 and approximately six to twelve inches in length. The right brace 58 attaches to the right levering arm 54 and the forward support rod 46 opposite the angle created by the right levering arm 54 and the forward support 46. The right brace 58 is usually attached by welding.

[0036] As will be recognized by those skilled in the art, it is possible to build an apparatus 10 using one levering arm, either the left levering arm 48 or the right levering arm 54. The levering arm would be hingedly attached to the base plate 20 and top plate 22 as described earlier.

[0037] It should be noted that a hinge attachment 60 provides an attachment that allows rotation in one plane, generally perpendicular to a separate plane. For example, but not by way of limitation, a rear support rod 44 attached to the left base frame 32 rotates along a proximate-to-distal plane perpendicular to the base plate 20 and the top plate 22. All the hinge attachments 60 for the supporting frame 30 of the apparatus 10 rotate in similar, parallel planes.

[0038] The structure of a hinge attachment 60 may be a nut and bolt arrangement where the bolt passes through the stationary support and the movable support. The hinge attachment 60 may include spacer washers to accommodate the spacing requirements associated with movement and support of the apparatus 10. For example, but not by way of limitation, a bolt may pass through the left base frame arm 36 and then through the associated end of a rear support rod 44 with a nut secured to the other end of the bolt, yet allowing the desired rotation.

[0039] The structure of a hinge attachment 60 may be a rivet arrangement where the bolt passes through the stationary support and the movable support. For example, but not by way of limitation, a rivet may pass through the left base frame arm 36 and then through the associated end of a rear support rod 44 secured to allow the desired rotation.

[0040] As will be recognized by one having ordinary skill in the art, any structure of a hinge attachment 60 allowing the desired rotation and the necessary attachment will be sufficient. For example, but not by way of limitation, Figure 7 shows a bracket 92 and rod 94 arrangement, which may be used. A bracket 92 has a square base 96 with triangular sides 98 with a rod 94 through the apexes 100 of the triangular sides 98, the rod 94 having the same length as one side of the square base 96. As an example of the use of

the bracket 92 and rod 94 arrangement, but not by way of limitation, a bracket 92 may be attached by welding to the base plate 20, and then passing the rod 94 through one apex 100 of a triangular side 98 and then through the appropriate end of a rear support rod 44 and finally through the opposite apex 100 of the opposite triangular side 98. The rod is then secured to each apex 100, thereby providing the necessary attachment and the desired rotation. Also, use of the bracket 92 and rod 94 arrangement allows for the possible exclusion of the left base frame 32 and the right base frame 34, as well as the vertical edge 24, because the bracket 92 may provide the necessary attachment source.

[0041] As shown in Figure 3, the restraining system 62, or means for restraining, of the apparatus 10 may be considered a separate but integrated part of the apparatus 10. The function of the restraining system 62 is to lock the motorcycle onto the apparatus 10. The structure of the restraining system 62 is unique, simple and effective.

[0042] A restraint base 64 is a flat piece of material approximately two to three inches in length. The first end of a restraint base 64 is attached to the left base frame arm 36 a few inches proximate the bend in the left base frame arm 36 using a hinge attachment 60. A restraint extension 66 is a flat piece of material approximately two to three inches in length. The first end of a restraint extension 66 is attached to the second end of a restraint base 64 using a hinge attachment 60. A restraint lever 68 is a flat piece of material approximately four to ten inches in length having a semi-circular notch 67 cut out of the restraint lever 68 at approximately half the length of the restraint lever 68. The first end of a restraint lever 68 is attached to the second end of a restraint extension 66 using a hinge attachment 60. The restraint extension 66 and the restraint lever 68 will be oriented outside the associated frame base arm (left 36 and right 40) when assembled.

[0043] The restraint base 64 is oriented vertically away from the base plate 20 and slightly toward the distal end of the apparatus 10 at approximately an eighty-degree angle relative to the base plate 20. The attached restraint extension 66 extends toward the distal end of the apparatus 10 at approximately a sixty-degree angle relative to the restraint base 64. The attached restraint lever 68 extends vertically at approximately a ninety-degree angle relative to the restraint extension 66.

[0044] An adjustment spacer 72 is essentially a threaded nut approximately one to three inches in length. The first end of an adjustment spacer 72 is securely attached to the second end of a restraint lever 68.

[0045] A threaded hook 74 is similar to a threaded rod in that approximately four inches of the first end of the threaded hook 74 is threaded. The first end of the threaded hook 74 is threadedly attached to the second end of the adjustment spacer 72. The second end of the threaded hook 74 is not threaded and is formed into a hook. The end of the hook is approximately one-and-a-half to two inches away from the shank of the hook. The hook portion of the threaded hook 74 may be rotated from a position where the hook points to the distal end of the apparatus 10 to a position where the hook points to the proximate end of the apparatus 10. The threaded hook 74 also passes through the hook aperture 28, such that the hook portion extends vertically approximately three to six inches above the plane of the top plate 22.

[0046] The locking arm 70 is a piece of flat material approximately four (4) to ten (10) inches in length and approximately one half of an inch wide. The locking arm 70 is securely attached to the restraint extension 66 at an angle of approximately fifty (50) to sixty (60) degrees relative to the restraint extension 66, and extending toward the base

plate 20. The locking arm 70 may be used to move the restraining system 62 from an open position to a secured position.

[0047] As will be recognized by those skilled in the art, in an alternative arrangement, the locking arm 70 may be securely attached to the restraint lever 68 at an angle of approximately twenty (20) to forty (40) degrees relative to the restraint lever 68, and extending toward the base plate 20.

[0048] The locking arm 70 has a locking aperture 71, which locking aperture 71 is generally a hole near the distal end of the locking arm 70.

[0049] The locking arm 70 may operate the restraining system 62 by moving the restraining system 62 between an open and closed position. While in the open position the restraining system 62 may move up and down and the threaded hook 74 may be rotated. While in the closed position the restraining system 62 may not move and the locking aperture 71 is aligned with a corresponding aperture in the corresponding frame base arm (left 36 and right 40). Thus, the restraining system 62 may be locked if a locking device, such as a padlock, is positioned through the locking aperture 71 and its corresponding aperture in the associated frame base arm (left 36 and right 40).

[0050] The structure of the restraint system 62 as previously described, including the restraint base 64, the restraint extension 66, the restraint lever 68, the locking arm 70, the adjustment spacer 72, and the threaded hook 74, are duplicated on the opposite side of the apparatus 10. Therefore, the parts just listed come in opposing pairs.

[0051] A coordinating rod 76 is approximately one and a half to two feet in length. The first end of a coordinating rod 76 is inserted through the junction of a restraint extension 66 and restraint lever 68, and may provide the hinge attachment 60 at that junction. The

second end of the coordinating rod 76 extends across the apparatus 10 and is inserted through the junction of a restraint extension 66 and restraint lever 68 on the opposite side of the apparatus 10, and may provide the hinge attachment 60 at that junction. The coordinating rod 76 helps maintain the threaded hooks 74 located on opposite sides of the apparatus 10 at approximately the same height throughout use of the apparatus 10. The coordinating rod 76 has a U-shape to allow for easy folding of the apparatus 10.

[0052] The apparatus 10 functions in basically two positions: a retracted position and an extended position. While in the retracted position, the apparatus 10 is essentially flat. The base plate 20 and the top plate 22 are planes parallel to each other. The rear support rods 44, and the forward support rods 46 are oriented toward the distal end of the apparatus 10 while the apparatus 10 is in the retracted position. The restraining system 62 is also oriented generally toward the distal end of the apparatus 10 while the apparatus 10 is in the retracted position.

[0053] The second end of the left levering arm 48 and left handle 50 and the second end of the right levering arm 54 and right handle 56 extend vertically away from the base plate 20. The left levering arm 48 with the left handle 50 and the right levering arm 54 with the right handle 56 provide the structural means and leverage enabling the apparatus 10 to lift the motorcycle off the ground and onto the top plate 22.

[0054] Figures 4, 5, and 6 show the intended use of the apparatus 10. As the apparatus 10 is moved from the retracted position to the extended position, the apparatus 10 passes through a balance point. The balance point is a theoretical position the apparatus 10 may be in where the motorcycle is balanced on the apparatus 10; the proximate ends of the left levering arm 48 and right levering arm 54 would be suspended in the air; and the rear

support rods 44 and the forward support rods 46 would be essentially perpendicular to the base plate 20.

[0055] When the apparatus 10 is in the extended position, the apparatus 10 proceeds to move through the balance point; the proximate ends of the left levering arm 48 and right levering arm 54 lay approximately flat on the ground, in approximately the same plane as the base plate 20. The weight of the motorcycle rests on the supporting frame 30 of the apparatus 10 and the proximate ends of the left levering arm 48 and right levering arm 54 while in the extended position.

[0056] When the apparatus 10 is initially moved to the extended position, the hooks 75 of the threaded hooks 74 should be pointed in the distal direction. When the apparatus 10 is in the extended position, the hooks 75 may be elevated approximately three to four inches and rotated toward the proximate direction, thereby allowing the hooks 75 to be placed over the footpegs 112 of the motorcycle. With the hooks 75 pointed in the proximate direction the hooks 75 will settle onto the footpegs 112 of the motorcycle, thereby engaging the restraining system 62 of the apparatus 10.

[0057] While the restraining system 62 is engaged as described, the apparatus 10 may not be moved back to the retracted position unless the hooks 75 are lifted above the footpegs 112 and rotated back toward the distal end of the apparatus 10. If the restraining system 62 is engaged with the footpegs 112 of the motorcycle and an attempt is made to return the apparatus 10 to the retracted position, the hooks 75 will apply pressure to the tops of the footpegs 112 and the top plate 22 will apply pressure to the bottom of the frame of the motorcycle. This pressure applied by the hooks 75 and the top plate 22 will prevent the apparatus from moving from the extended position to or through the balance point.

Gravity will prompt the motorcycle and the apparatus 10 to return to the extended position, and the engaged restraining system 62 will prevent the motorcycle and apparatus 10 from moving past the balance point. These opposing forces are what keeps the motorcycle locked to the apparatus 10 while the restraining system 62 is engaged.

[0058] The top plate 22 may come in various forms. The general form for the top plate 22 would simply be a flat surface. The top plate 22 may also have a grating, slotted appearance, thereby making it a grated top plate. The top plate 22 may also have an opening or aperture, approximately six (6) to eight (8) inches square, thereby making it an open top plate 86. The open top plate may be especially useful for certain types of maintenance or repairs, for example without limitation, changing the oil in the motorcycle. Any form of the top plate 22 may be covered with a rubber mat, or non-skid material, to provide a surface promoting a more secure support for the motorcycle.

[0059] The apparatus 10 is designed for use as a means for supporting a motorcycle while parked and while being transported. For example, to use the apparatus 10 for transporting a motorcycle, the bed 78 of a pickup truck or trailer may be equipped with L-supports 80. The L-supports 80 are generally made of the same material as the apparatus 10, are approximately one to three feet in length, approximately matching the length of the base plate 20, and have an “L” shape. The L-supports 80 would generally be welded to the bed 78 of a pickup truck or trailer so that the first arm of the L-support 80 extends perpendicularly from the bed 78 or trailer. The second arm of the L-support 80 points inward creating a space where the left and right edges of the base plate 20 may be slid under the second arm of the L-support 80 and above the bed 78 or trailer. The second arm of the L-support 80 may have holes or apertures that correspond to holes or

apertures in the left and right edges of the base plate 20, thus providing means to secure the base plate 20 to the L-support 80, thereby securing the apparatus 10 to the bed 78 or trailer.

[0060] As another example of how the apparatus 10 may be used to transport a motorcycle, the base frames of the apparatus 10, which may also have a square cross-section, may have base feet securely attached to the underneath side of the base frames. The base feet will have an “L” shape, similar to the L-supports 80, and the arm of the base feet will extend inward. The base plate 20 will be securely attached to the bed 78 or trailer, and may be formed so as to have holes or apertures, or slots providing an edge of the base plate 20, which edge may be engaged by the base feet. Generally, the base feet will be positioned near the edges of the base plate 20, and the apparatus will have to be lowered a small distance until the base frames rest on the base plate 20. The base feet may then be slid toward the base plate, thus essentially locking the apparatus onto the base plate 20 by means of the base feet.

[0061] As will be recognized by those skilled in the art, any means that will allow the base plate 20 to be removably attached to the bed 78 or trailer, when the apparatus 10 is securely attached to the base plate 20, will enable the apparatus 10 to be used to transport a motorcycle. Similarly, any means that will allow the apparatus 10 to be removably attached to the base plate 20, while the base plate 20 is securely attached to the bed 78 or trailer, may be used to transport a motorcycle.

[0062] What is claimed and desired to be secured by United States letters patent is: